

A New Method To Combat With Frequency Offsets In Wireless OFDM Systems

Arshad, K. Sheikh, A.U.H.; Dept. of Electr. Eng., King Fahd Univ. of Pet. & Miner.,
Dhahran, Saudi Arabia;

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King Fahd University of Petroleum & Minerals

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Summary

Orthogonal frequency division multiplexing (OFDM) is a powerful technique employed in communication systems suffering from frequency selectivity of channel. Coherent demodulation requires channel estimation, which improves performance though with increased complexity of receiver structures. Channel estimation for Wireless OFDM systems require transmission of pilot symbols. For a desired BER, number of pilot symbols mainly depends on Doppler frequency of channel. In this paper, we propose a new scheme of pilot symbol insertion and compare it with existing pilot patterns. OFDM Systems are highly sensitive to frequency offsets and one main source of such offsets is channel phase. In this paper, we also propose an adaptive scheme for channel phase compensation.

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